Centre d'Estudis Demogràfics

INTERACTION BETWEEN LIFE CYCLE EVENTS AND THE EDUCATION PROCESS: AN ANALYSIS OF SPANISH DATA

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El document és una presentació realitzada al
International Conference "Education and Demography".
Vienna Institute of Demography / IIASA.
Viena (Àustria), 30 de novembre i 1 de desembre de 2009.

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Resum.- *Interacció entre esdeveniments en el cicle de vida i procés educatiu: una anàlisi de les dades espanyoles*.

El document, en format presentació, va ser exposat com a comunicació al *International Conference "Education and Demography",* organitzat pel Vienna Institute of Demography i pel International Institute for Applied Systems Analysis-IIASA. Viena (Àustria), 30 de novembre i 1 de desembre de 2009.

Paraules clau.- Fecunditat, família, infecunditat, cicle de vida, procés educatiu, Espanya.

Resumen.- *Interacción entre eventos en el ciclo de vida y proceso educativo: un análisis de los datos españoles.*

El documento, en formato presentación, fue expuesto como comunicación en el *International Conference "Education and Demography"*, organizado por el Vienna Institute of Demography y por International Institute for Applied Systems Analysis-IIASA. Viena (Austria), 30 de noviembre y 1 de diciembre de 2009.

Palabras clave.- Fecundidad, familia, infecundidad, ciclo de vida, proceso educativo, España.

Abstract.- *Interaction Between Life Cycle Events and the Education Process: an Analysis of Spanish Data*

The document was exposed at the *International Conference "Education and Demography",* organized by the Vienna Institute of Demography and International Institute for Applied Systems Analysis-IIASA. Vienna (Austria), November 30 and December 1, 2009.

Keywords.- Fertility, family, childlessness, life cycle events, education process, Spain.

Interaction between life cycle events and the education process: an analysis of Spanish data

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Universitat Autònoma de Barcelona
Spain

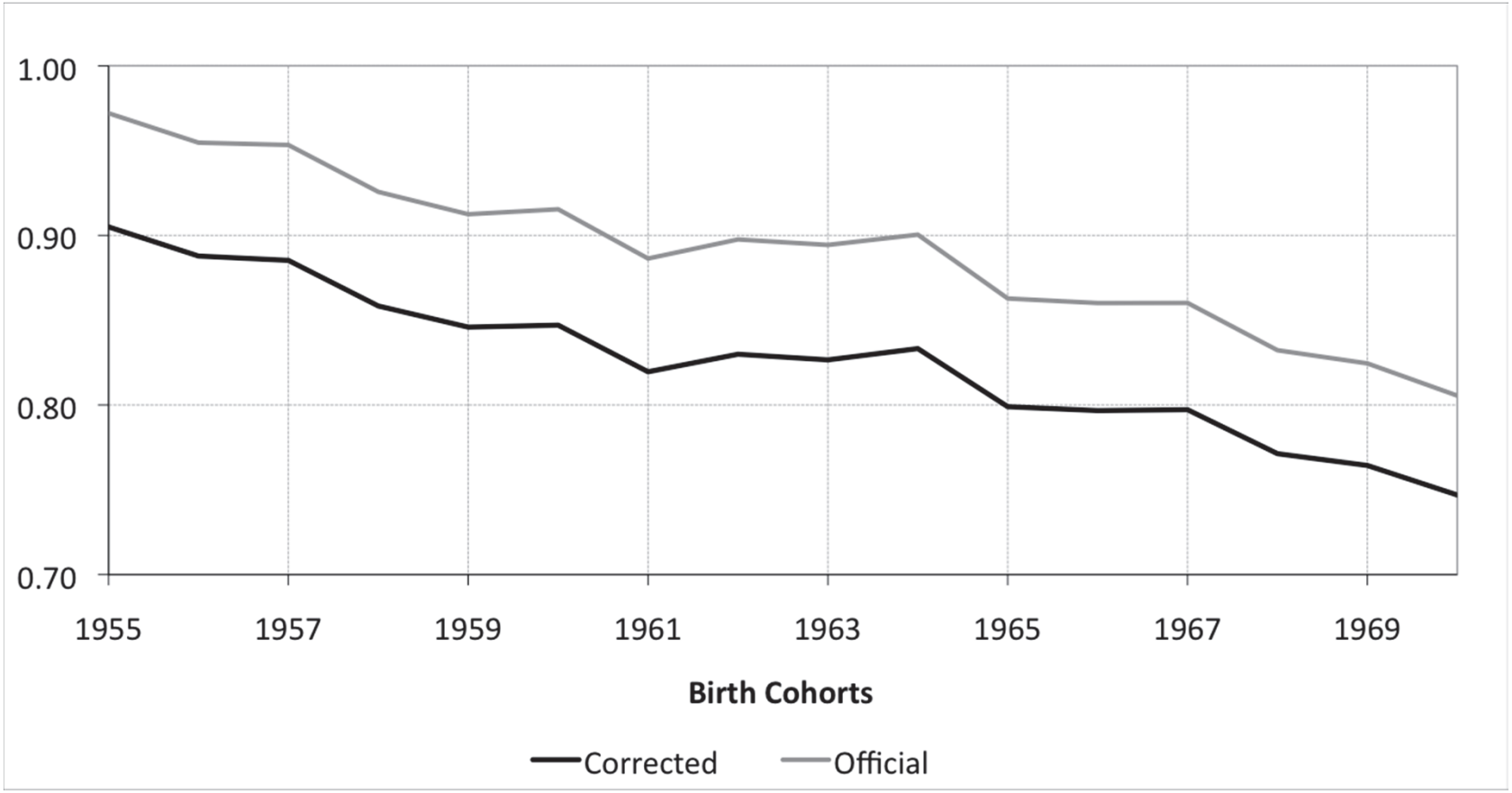
Among FFS countries, Spain had the highest differences in childlessness levels by educational attainment…

Childlessness levels for women at age 40 by educational level during the 1990s, selected European countries

Country	*Primary*	*Secondary*	*University*
Spain	8.1	18.5	31.6
Italy	7.6	14.9	19.3
France	7.4	6.1	15.2
Portugal	7.5	13.7	12.1
Austria	7.3	7.1	12.0
Bulgaria	6.5	12.5	8.9

Source: UNECE, Fertility and Family Surveys (FFS), women aged 40-44 years at time of survey

… childlessness levels for all women are also increasing steadily



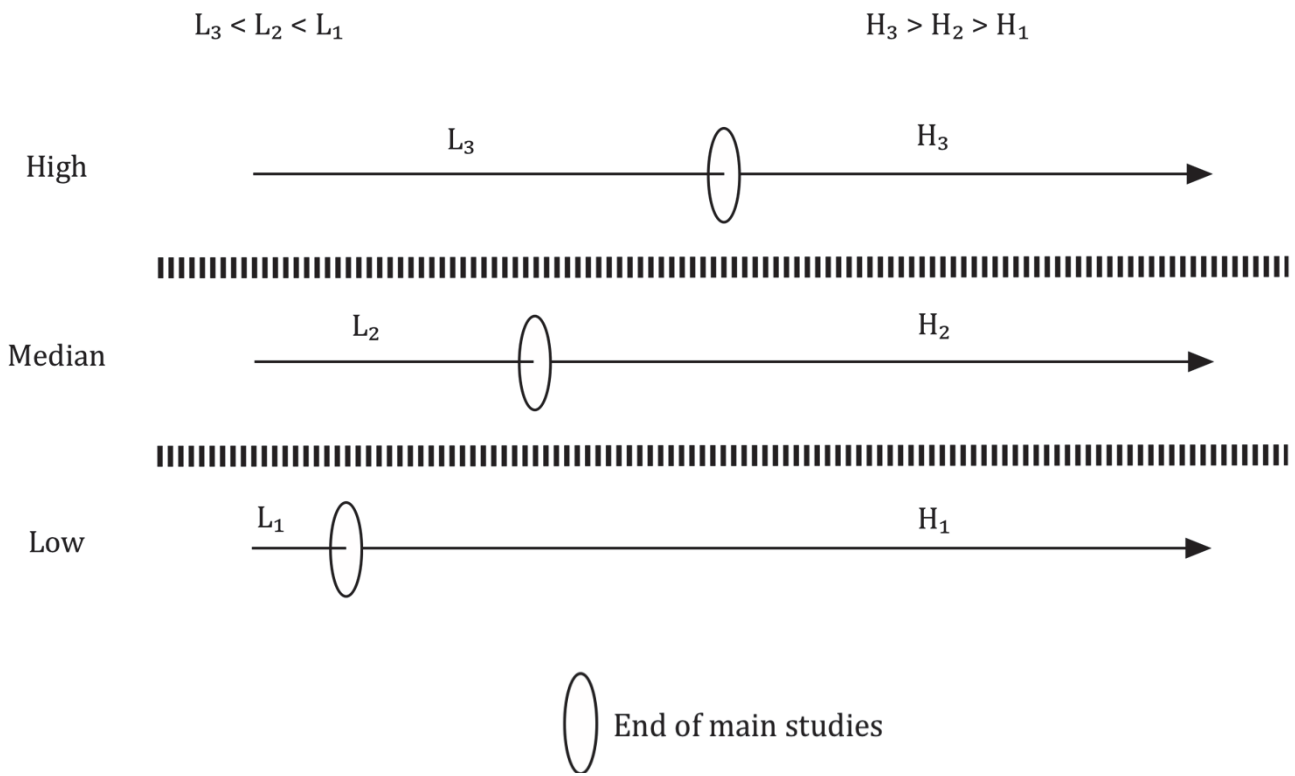
Questions asked in this study

- What part of the differences is due to the way women are grouped (by educational attainment at time of survey: a fixed characteristic)?
- Is the increase in childlessness level for all women due mainly to composition effects or to changes in behaviours for women at the same educational level?

Data & methods

- Fertility, Family and Values Survey of Spain (2006): 9 737 women aged 15 years and more.
- Education history is reconstructed; variable used is age at the end of main studies.
- 3 life cycle events studied: leaving parental home, entering a first union, having a first child.
- Methodology: (multistate) life table analysis.

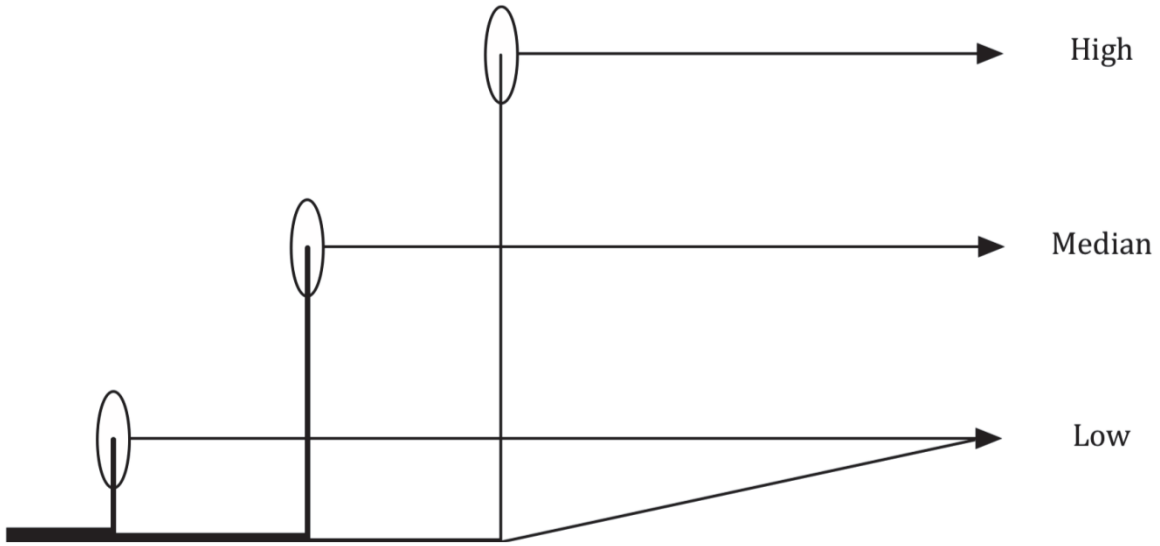
Transition rates for fixed educational attainment: maximum between-group heterogeneity



Problem: the risks for the event are conditioned on something that will happen in the future (anticipatory analysis)

Two ways to manage the dynamic interaction between life cycle events and the education process

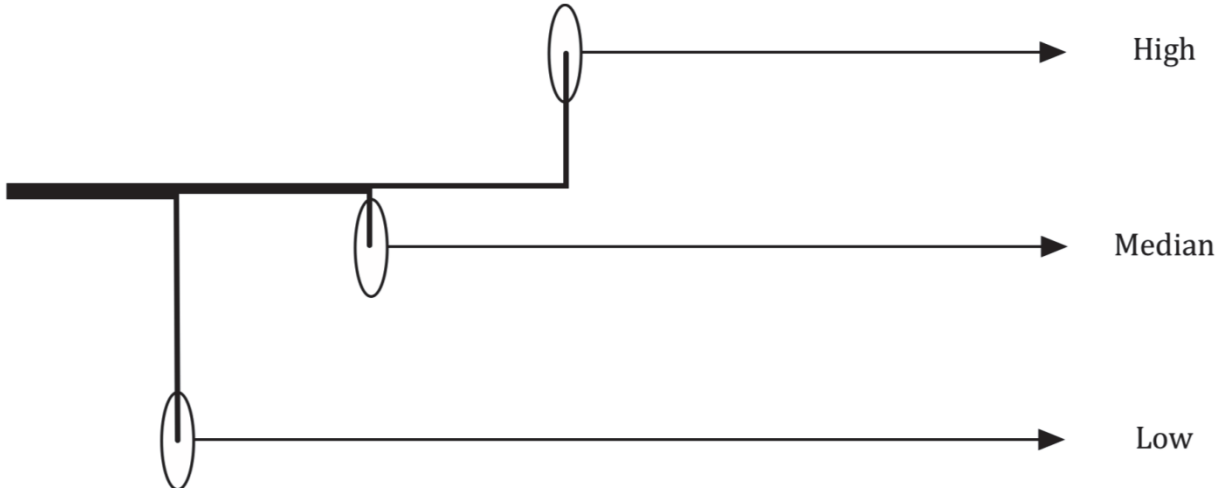
1) Only count events that occur AFTER the transition out of studies (Hoem & Kreyenfeld, 2006)



Good for fertility (very few births before the end of main studies), but not for leaving parental home or entering a first union.

Two ways to manage the dynamic interaction between life cycle events and the education process

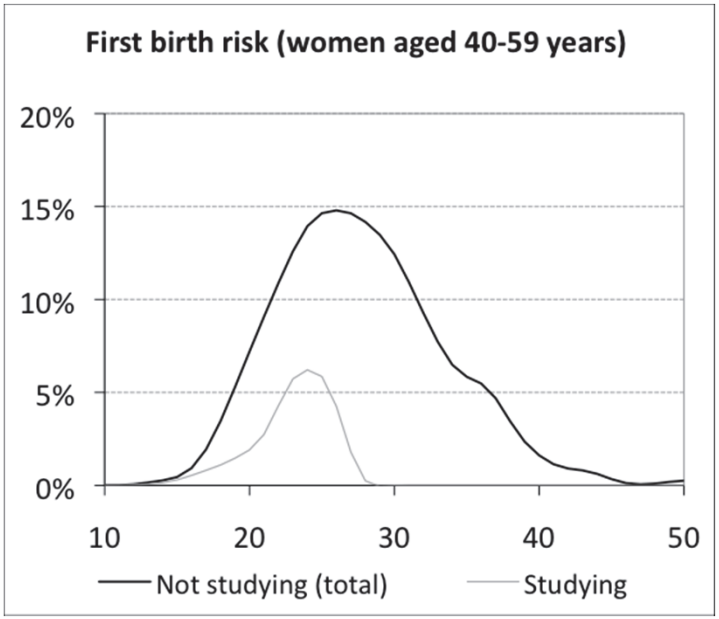
2) Maximum between-group homogeneity: risk is the same for all while studying

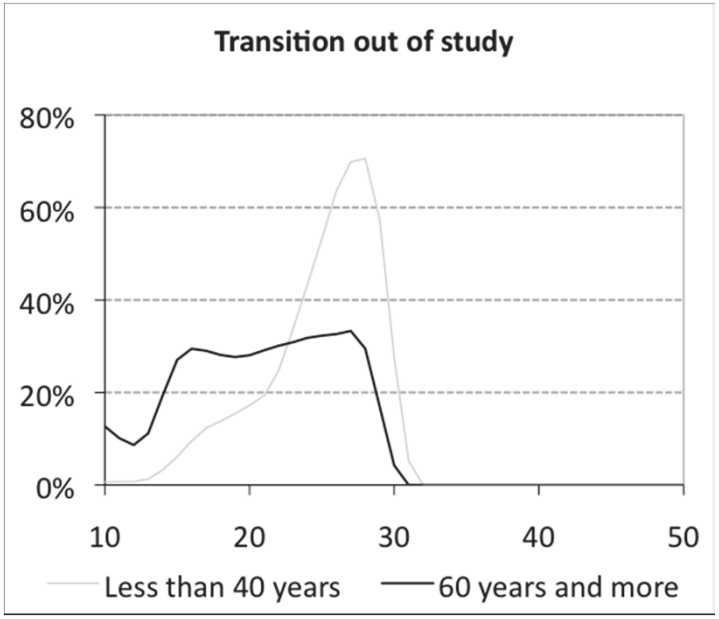


This is the method used here. We call it "**dynamic grouping**".

We compute three sets of life table rates by cohort

- Two sets by age: event risk while studying and for transition out of studies.
- One set for event risk by age at the end of main studies and duration since then.

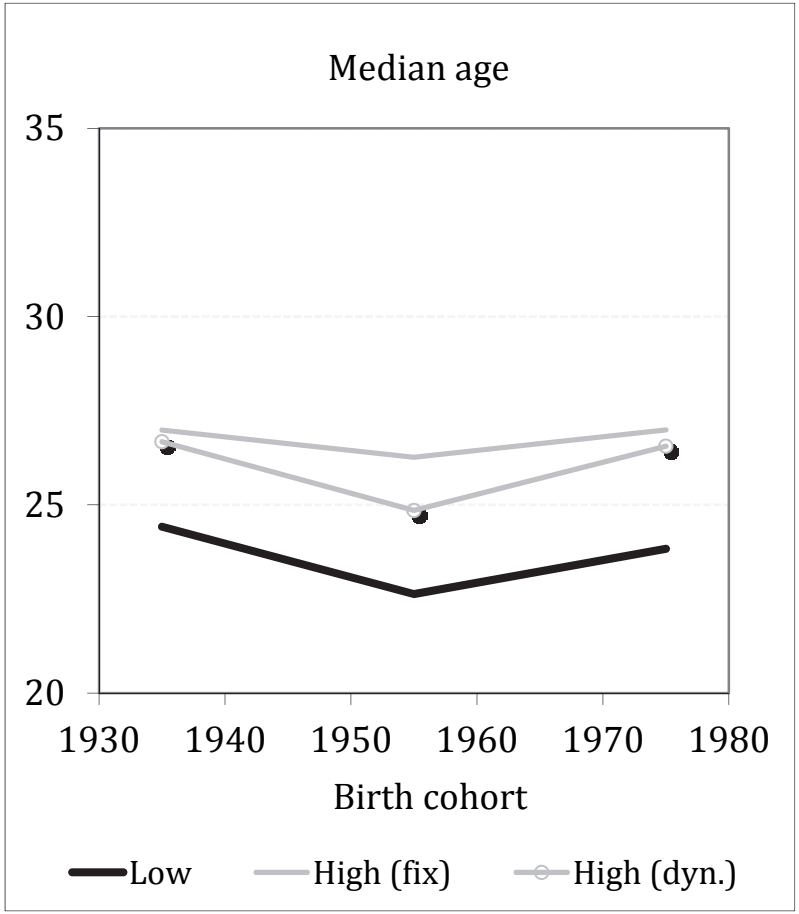


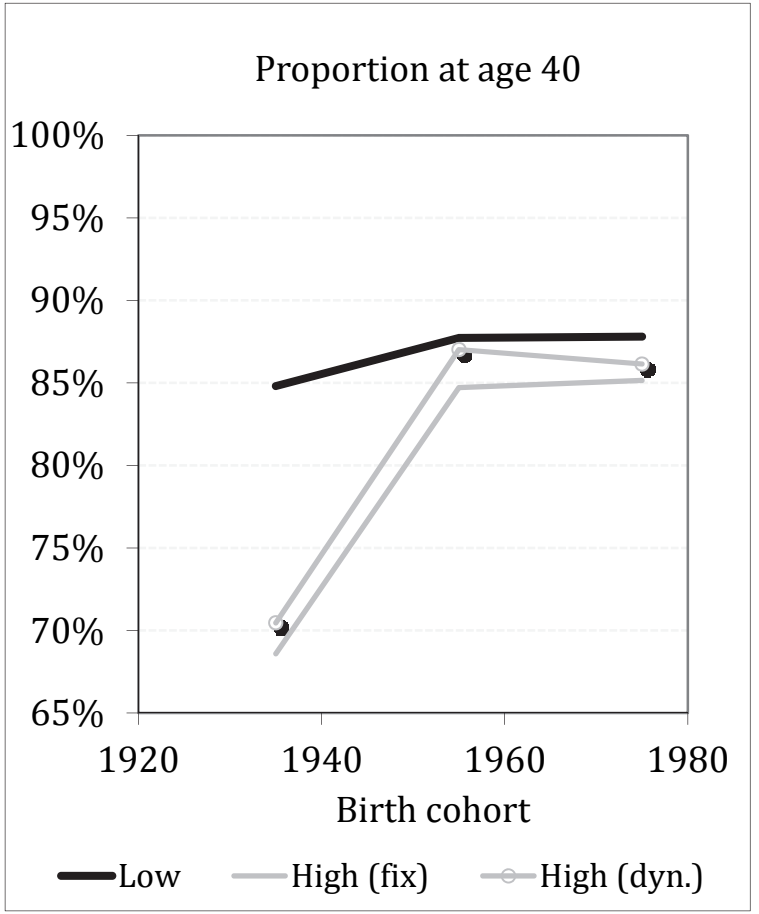


(smoothed curves)

Results 1: is the difference by educational levels reduced using dynamic grouping?

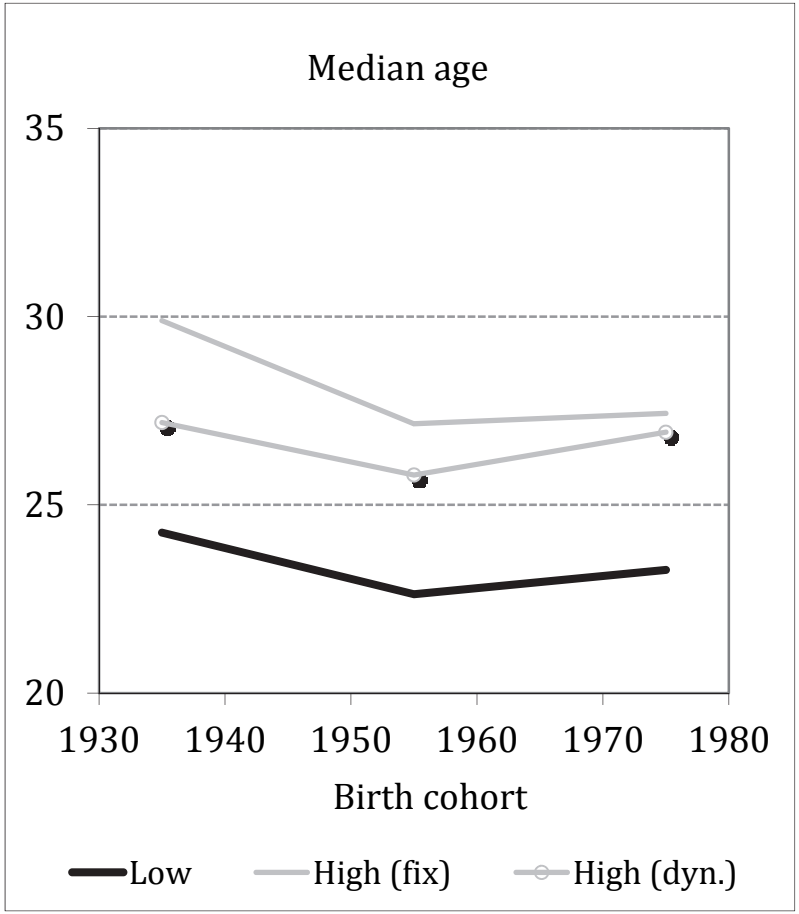
1) Leaving parental home

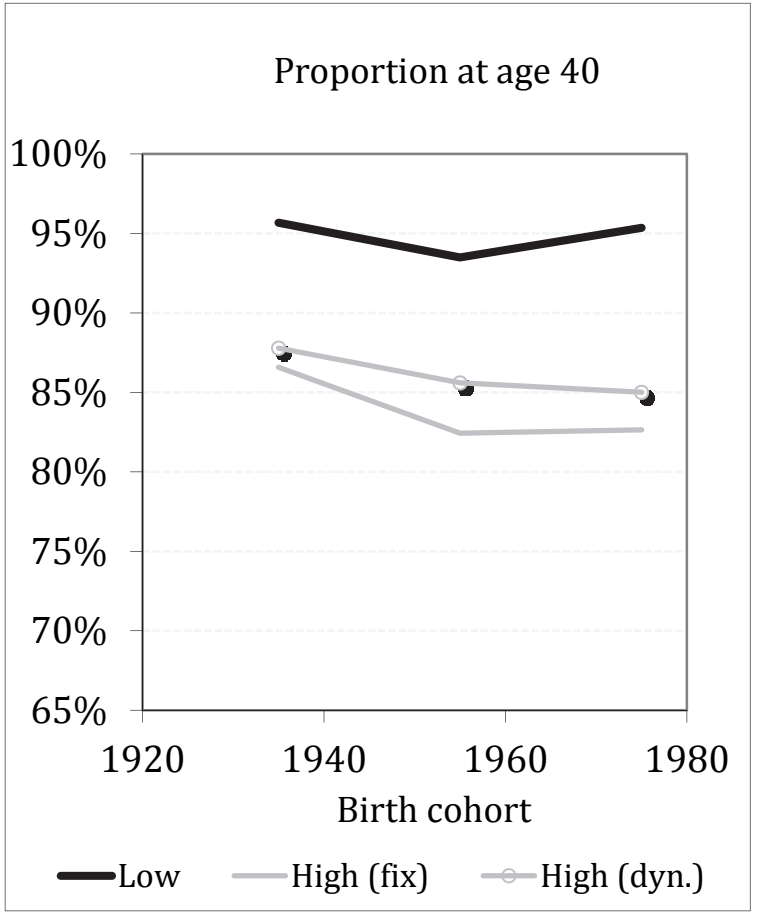




Results 1: is the difference by educational levels reduced using dynamic grouping?

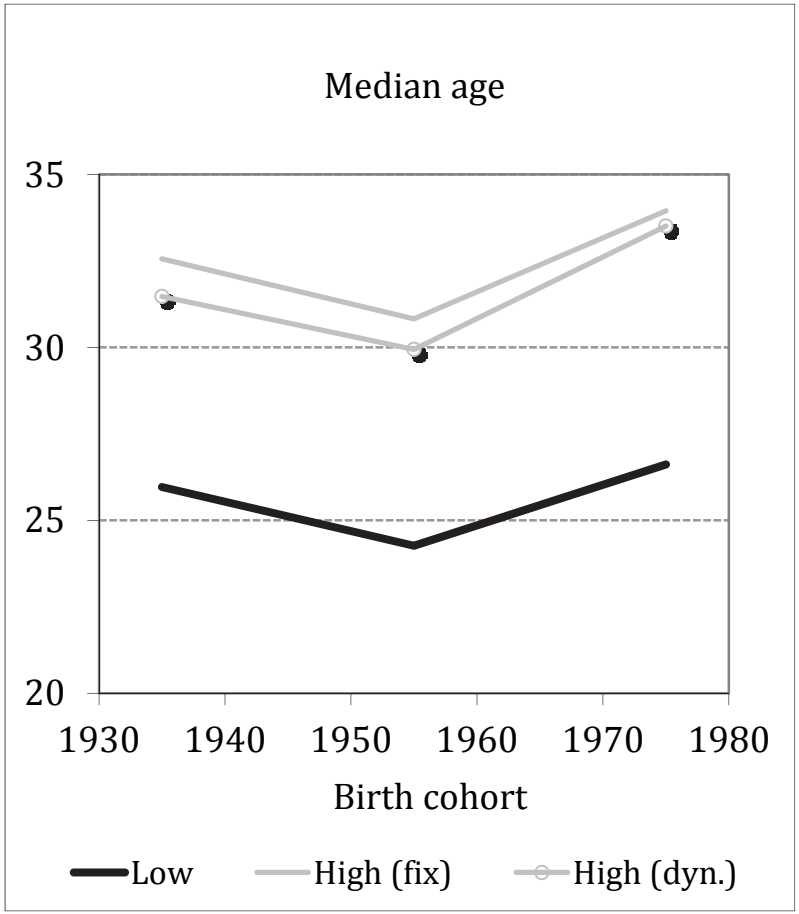
2) Entering a first union

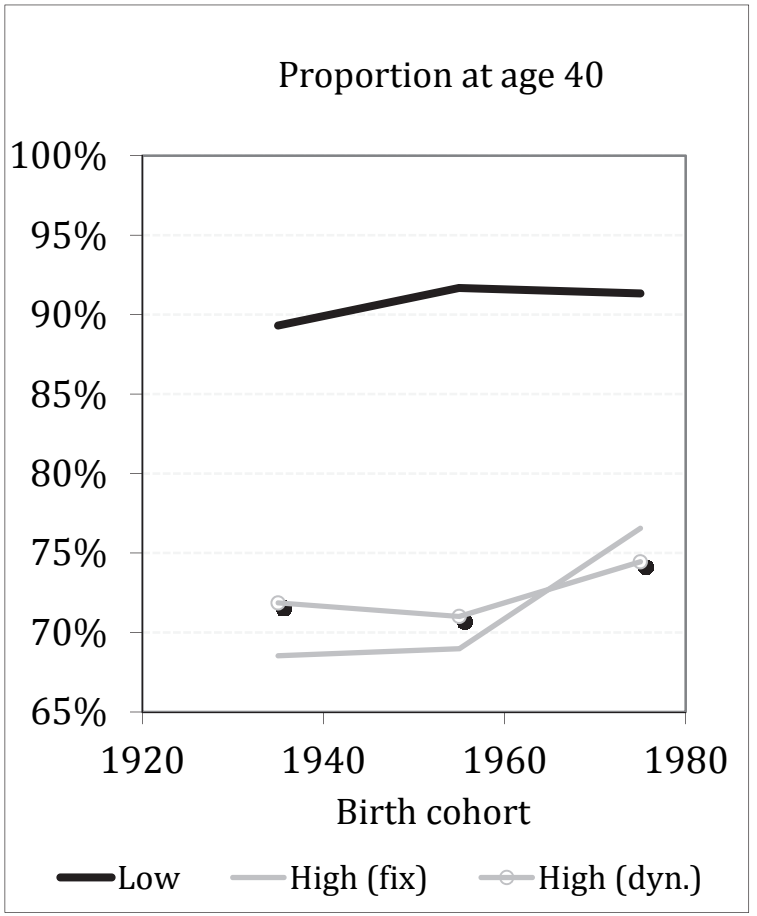




Results 1: is the difference by educational levels reduced using dynamic grouping?

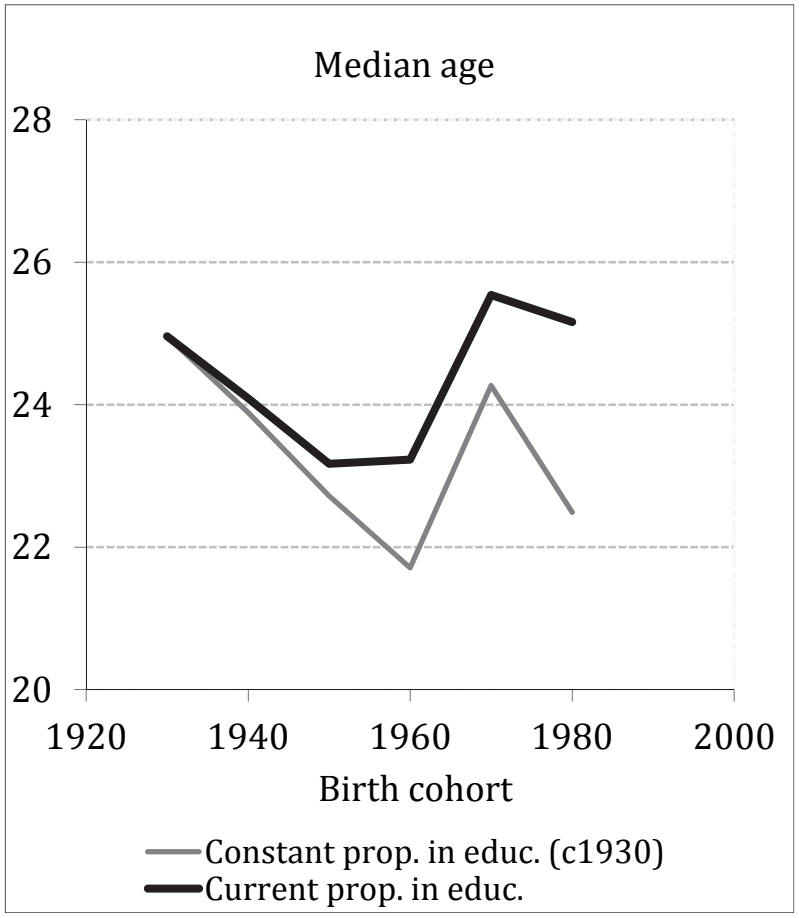
3) Having a first birth

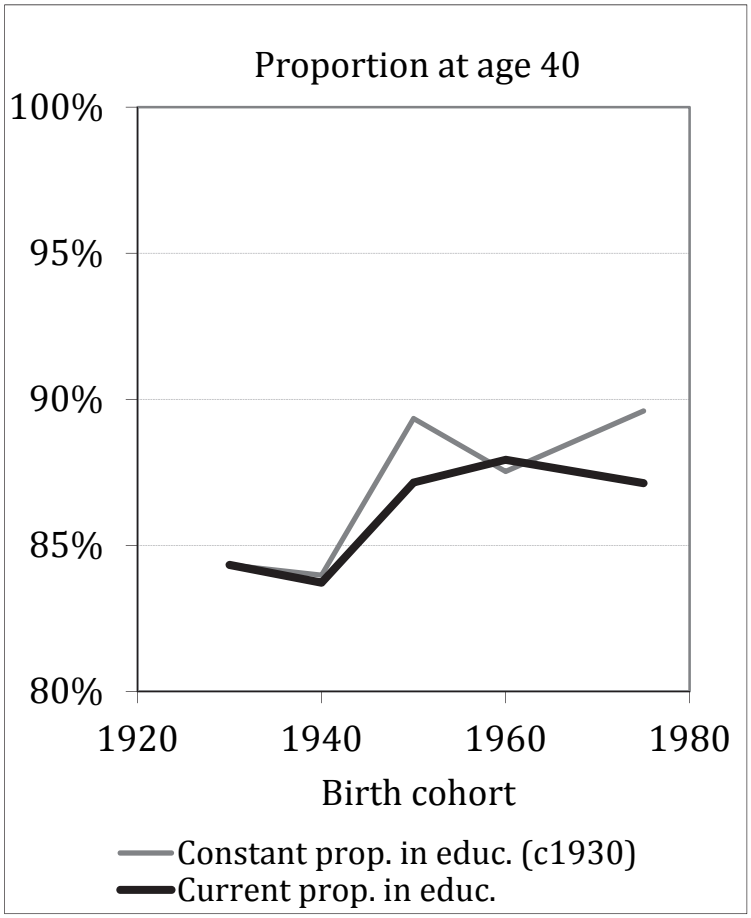




Results 2: are the recent changes in tempo and quantum of events explained by a **composition** effect?

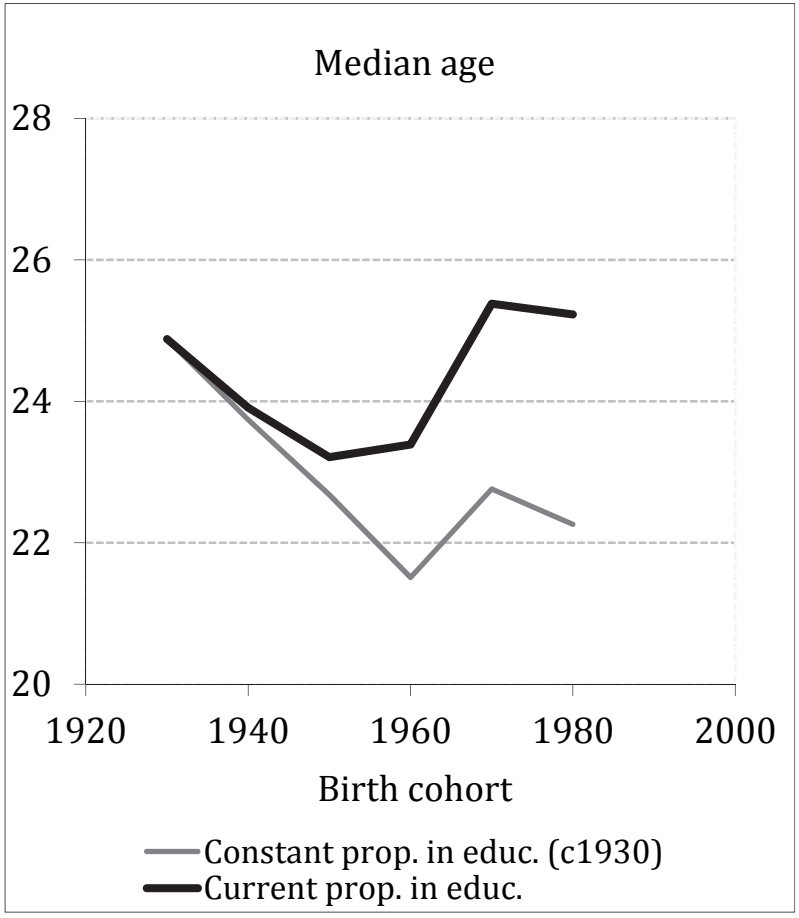
1) Leaving parental home

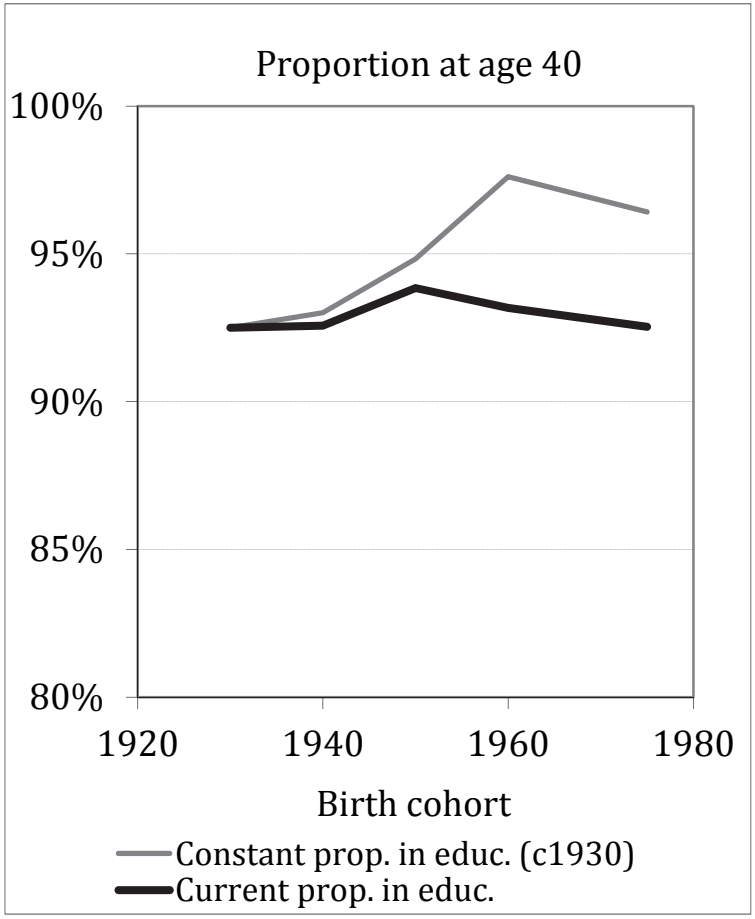




Results 2: are the recent changes in tempo and quantum of events explained by a **composition** effect?

2) Entering a first union





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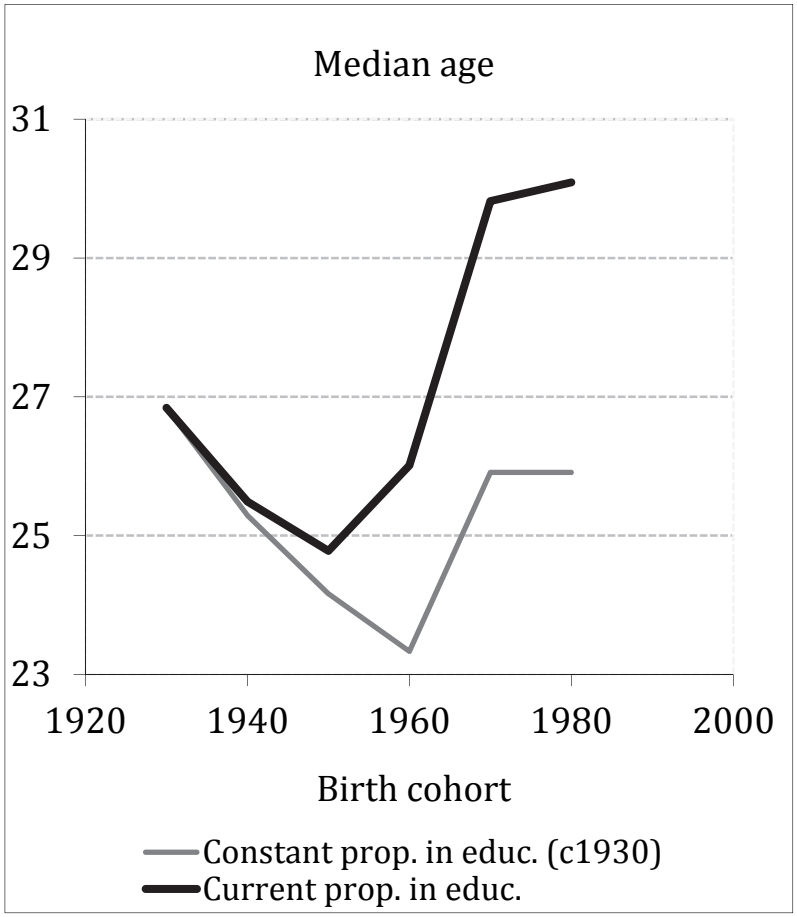

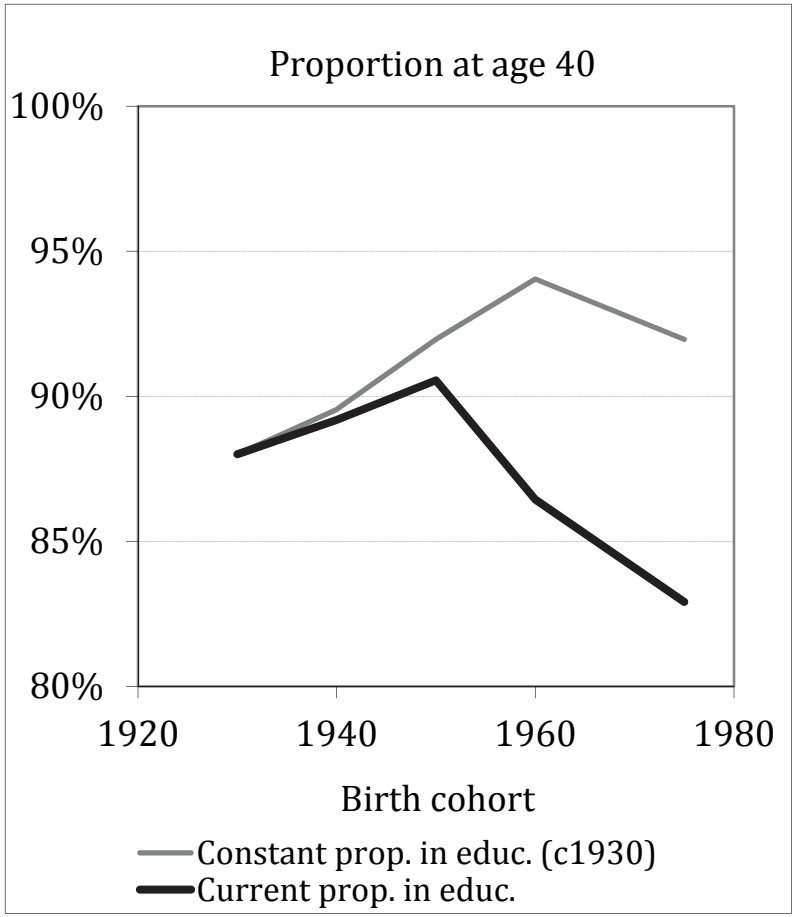

Conclusions

- Using final educational attainment as a selection variable for comparing groups can lead to biased results, and generally tends to magnify the differences between highest and lowest educated. But in Spain the bias is small for fertility differentials.
- The pronounced increase in total childlessness levels is due to the higher education expansion (change in composition), not to a change in fertility behaviours (that in fact would lead to a *decrease* in childlessness levels, at constant educational composition).